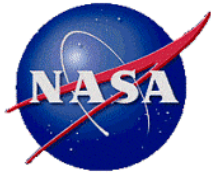# Risk Management with ePORT
electronic Project Online Risk Tool

August 23, 2005

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Systems Management Office/QD02

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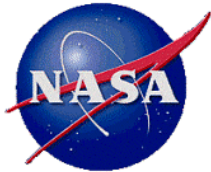
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Agenda

- What is ePORT?
- Why was the ePORT Risk Module Built?
- Key Tenets to ePORT Development
- Why use the ePORT Risk Module?
- ePORT Risk Management Flow
- ePORT Demo

What is ePORT?

The electronic Project Online Risk Tool (ePORT) is a web-based risk management tool that provides a common framework for all programs, projects and activities, independent of their size and budget, to capture and manage their risks.

- *To identify, track and/or mitigate risks in support of program or project risk plans.*

- *To standardize evaluation criteria for common management reporting.*

- *To simplify Program/Project Manager reporting while improving Product Line and Center Management insight.*

- *To develop a web-based reporting capability for easier collection and distribution of program and project data.*

- *To develop an archive of program/project data for historical reference.*
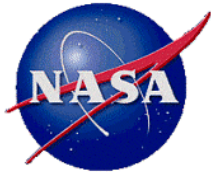
Why was the ePORT Risk Module Built?
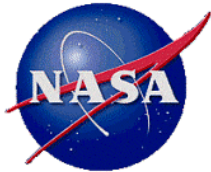
Marshall Space Flight Center

- By early 2001, several independent studies were reporting insufficient risk management practices (e.g., Faster, Better, Cheaper Task Force; Mars Climate Orbiter Mishap Investigation Board; NASA Integrated Action Team).

- MSFC SMO reacted to the Agency and Center's refocus on risk management by meeting with S&MA and Program/Project Risk Managers across MSFC and at other NASA Centers to assess available risk management tools.

- This assessment highlighted a general conclusion that no cost-effective, robust, cross-platform tools were available that fully met Program/Project needs. Because of this condition larger initiatives would build their own database systems from scratch at significant cost while smaller initiatives struggled to effectively manage risks due to the lack of funds.

- Since one of SMO's chartered functions is to "Direct the development of standard processes, tools, and guidelines for program/project management…", we added the Risk Management Module to the ePORT requirements.

- From July 2001 to November 2002, SMO worked with HQ and other Centers to develop recommendations for the Agency PMC to establish common approach for health status and risk management reporting which was adopted.

- In February 2002, SMO completed successful Operational Readiness Review of ePORT Core and made version 1.0 available to MSFC Programs/Projects.

Key Tenets to ePORT Development

- Program/Project Managers own their assessments.
- Assessments should be maintained at least one level lower than required by management to improve accuracy in reporting.
- Common reporting criteria should be used where established. Where not established allow as much flexibility as possible.
- Link to data that formally resides elsewhere; do not duplicate.
- Allow users to download reports in formats that can be easily incorporated into standard applications (e.g., Word, Power Point).
- Ensure tool provides benefit to Program/Project, not just upper management.
- Allow Managers as much flexibility as possible for data organization and access control.
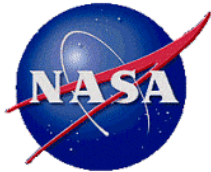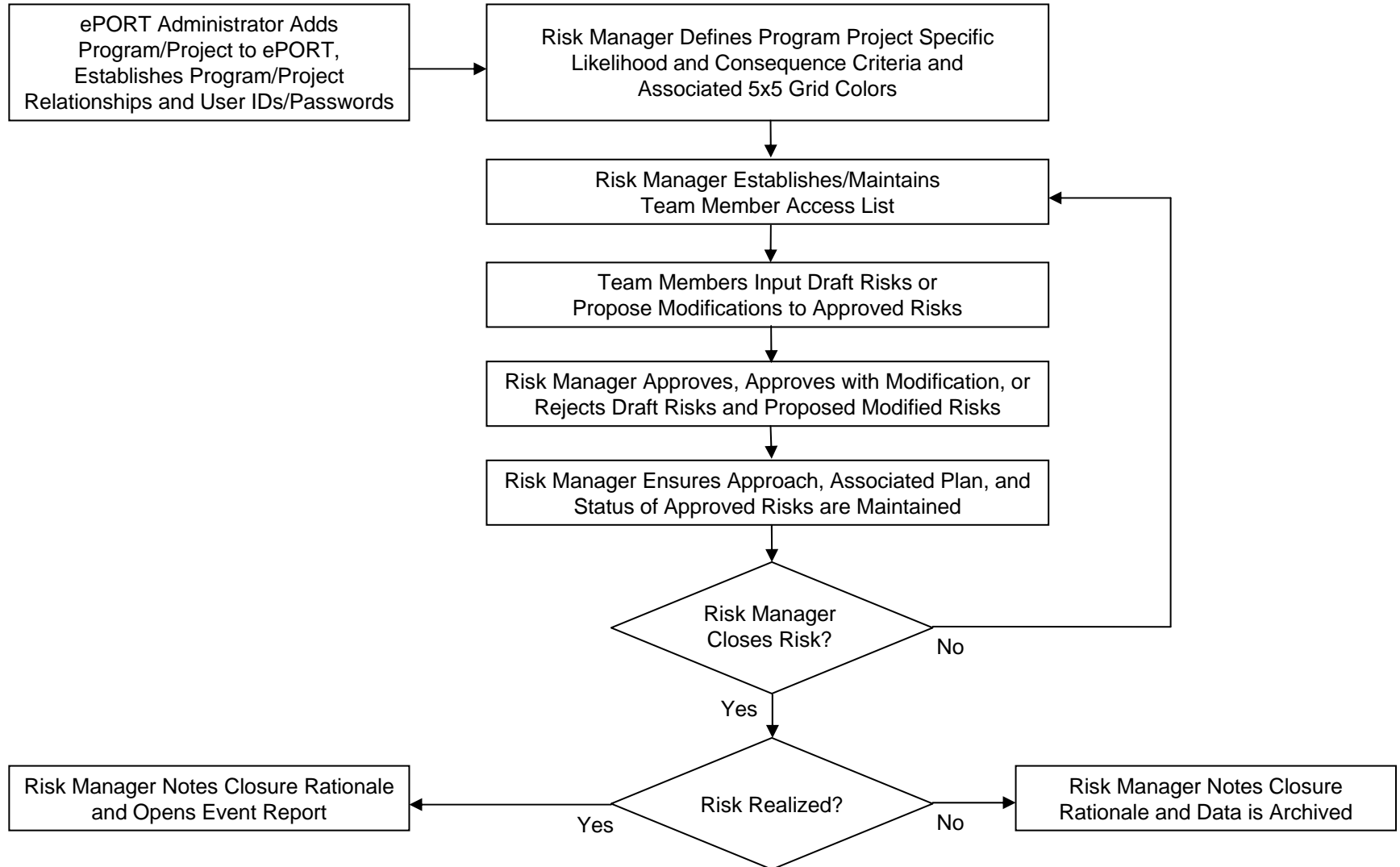
Why use the ePORT Risk Module?
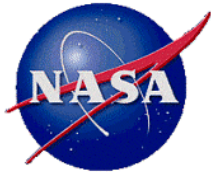
- **Provides necessary capabilities to manage risks effectively**
  - Utilizes continuous risk management approach consistent with proven S&MA and industry standards.
  - Ensures all MSFC initiatives have risk management tool independent of size and budget.
  - Satisfies Agency PMC risk reporting requirements.

- **Ensures Integrity and Security of Data**
  - Complies with Agency/MSFC IT requirements (NPG2810.1, MPG2810.1, 508 Compliance).
  - Provides secure access controls (MSFC Firewall, User ID/password, User ID partitions).
  - Ensures data security (data encrypted on server and during transmission).
  - Security plans, development/deployment procedures, data recovery plans ensure data is in a controlled environment.
  - Provides initiative managed proprietary group controls.
  - Team member draft risks are kept segregated from approved risks.
  - All data archived to ensure configuration control and easy recall of changes.
  - All data backed up nightly by ODIN.

- **Cost Effective Robust Solution**
  - Requires no cost to Program/Project to develop, maintain, or access ePORT.
  - Provides web-based cross-platform access (PC/Mac).
  - Supports real-time full access by multiple users.
  - Requires no client-side software to install.
  - Allows secure access by team members located external to MSFC.
  - Reduces report generation time significantly.

- **Tailorable to Initiative needs**
  - Allows for initiative tailored risk criteria and teams.
  - Allows for Program and Project risk integration.
  - ePORT support contract in place to add unique reports for initiatives.
  - Capable of importing risks from existing databases or spreadsheets.

- **Tested and Proven Capabilities**
  - Used by more than a 50 Initiatives (e.g., GP-B, MSRR-1, Discovery/New Frontiers & MSFC CIO Operations/ UNITeS)
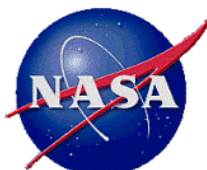
Risk Management Flow

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┌─────────────────────────────┐        ┌──────────────────────────────────┐
│ ePORT Administrator Adds    │        │ Risk Manager Defines Program     │
│ Program/Project to ePORT,   │───────▶│ Project Specific Likelihood and  │
│ Establishes Program/Project │        │ Consequence Criteria and         │
│ Relationships and User      │        │ Associated 5x5 Grid Colors       │
│ IDs/Passwords               │        └──────────────────────────────────┘
└─────────────────────────────┘
```

ePORT Administrator Adds Program/Project to ePORT, Establishes Program/Project Relationships and User IDs/Passwords

Risk Manager Defines Program Project Specific Likelihood and Consequence Criteria and Associated 5x5 Grid Colors

Risk Manager Establishes/Maintains Team Member Access List

Team Members Input Draft Risks or Propose Modifications to Approved Risks

Risk Manager Approves, Approves with Modification, or Rejects Draft Risks and Proposed Modified Risks

Risk Manager Ensures Approach, Associated Plan, and Status of Approved Risks are Maintained

Risk Manager Closes Risk?

No

Yes

Risk Realized?

Yes — Risk Manager Notes Closure Rationale and Opens Event Report

No — Risk Manager Notes Closure Rationale and Data is Archived

ePORT Login Screen

WARNING! This is a US Government computer. This system is for the use of authorized users only. By accessing and using the computer system you are consenting to system monitoring, including the monitoring of keystrokes. Unauthorized use of, or access to, this computer system may subject you to disciplinary action and criminal prosecution.

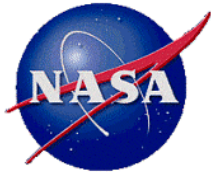**electronic Project Online Reporting Tool (ePORT)**

Login: [ ]

Password: [ ]

I am an authorized user and agree to the terms outlined above.

To request access, complete the User Access Form.
To request an initiative be added, complete the Initiative Setup Form.
For preview ePORT capabilities, take a look at the User's Guide.

System Requirements

Established users having login/password difficulties, please contact:
michelle.b.delay@nasa.gov.

ePORT Main Menu & Message Center

George C. Marshall Space Flight Center
Systems Management Office

8/23/2005
ePORT 4.2

Welcome to ePORT!

noon,

*Denote View Only

OSP

Message Center

Profile

Risks

Events

Reports

-Comments/Questions

Setup
-My Preferences
-ePORT Admin
-Risk Admin

Sign Out

A major rework of the database structure and page layouts will be implemented on March 23, 2003. The adding of users to ePORT function will be returned as an ePORT administrator task while the Program, Project and Risk Managers will still grant access to their initiatives from the approved user list.

8/23/2005, OSP - The deadline for risk modifications will be noon on Thursday in order to prepare for the Friday briefing.

8/23/2005, ePORT Admin - A Hotfix was applied to modify the new initiative reques and the view user form within the Admin module.

User Selects from Initiatives Approved for Access

Any Planned Upgrade will Appear Here for Advance Notice

Detail Information Of ePORT Version History Available

Link to Risk Management Module

Users can Report Problems or Suggestions Directly from Tool

Initiative Unique Messages Displayed to Approved Team Members Only

Global ePORT Admin Messages Displayed to All Users

Risk Admin Manage Initiative Unique Teams, Access, and Criteria

ePORT Risk Index

Allows for Program & Project Risk Integration

Displays Summary of All Open Risks by Criticality

Creates a Clean Print View in PDF, CSV, RTF, or DOC Formats

Draft Risks Partitioned from Approved Risks

Allows Multiple Ways to Sort or Find Specific Risks

Designed & Tested to Section 508 Usability Standards

Automatic Flags Identify when Proposed Mods Exist

ePORT Risk Information Sheet

Allows for Initiative Tailored Risk Criteria (L/C, Timeframe, 5x5 Grid)

All Data is Archived & Available to View

Includes Initiative Managed Proprietary Controls

Changes from Previous Versions Highlighted in Red

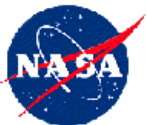Includes Ability to Track Detail Mitigation Plans

Automatic Time Tagging of Status Comments

Includes Initiative Defined Teams, Owners, & Categories
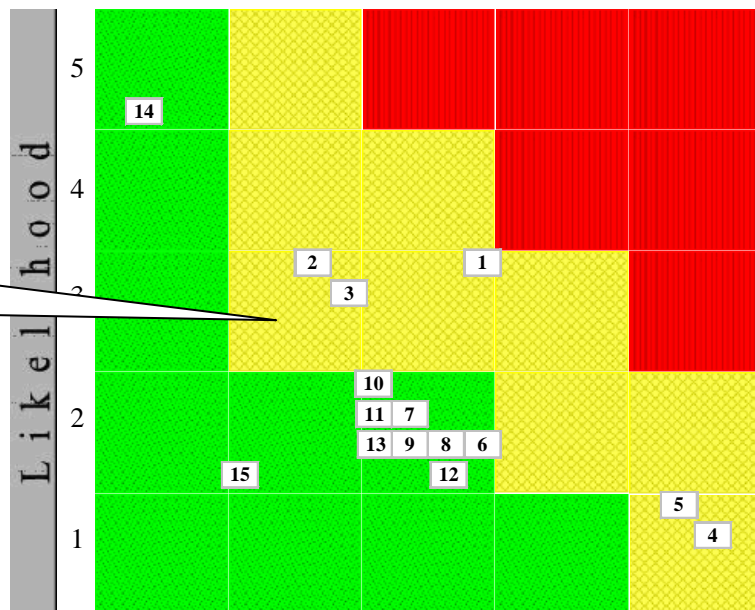
ePORT Risk 5x5 Summary

Satisfies Agency PMC Risk Reporting Requirements

Example 5x5 Risk Summary From 10/08/2002 to 07/08/2003
(Top 15 Risks)

User Defined Reporting Period

Grid Colors Defined by Initiative

Likelihood

Consequence

Automatic Trending

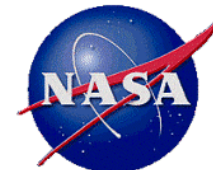# ePORT Risk Ranking Algorithm

- ePORT uses the following criteria to rank risk
  - By criticality (High, Med, Low)
  - By worst-case LxC product
  - By composite LxC (sum of each LxC product for cost, schedule, technical consequence)
  - By timeframe (near, mid, far)
  - By approach (mitigate, research, watch, accept)
  - By risk ID number

ePORT Risk Overview

Satisfies Agency PMC Risk Reporting Requirements

Data Set Exclusions Defined Automatically on Report

Risk Overview
Top 20 Risks excluding Closed Risks

Rank	ID	Risk Statement	Planned Closure	Status L/C	Approach Active Plan	Owner	Management Comments
4	Example-08	**Degraded Vehicle Performance from EMI**	07/30/03	Open	Mitigate	Bob Smith	
M		Description: Requirements do not reflect environments. Impact: Threat to vehicle performance: (1) GPS performance; (2) sensor response signal degradation; (3) software reactions to degraded signals; and (4) the verification of Electromagnetic Compatability (EMC) regarding the effect of GPB systems.		L: 1 C(c): 1 C(s): 1 C(t): 5	Implement additional testing per ECR.		The University PCB 606 was approved by the MSFC Change board (5/7/03) with modifications. AZ directed to begin test preparations. MSFC working to minimize cost and schedule impacts.
5	Example-05	**Degraded Performance because of Ground Testing Limitations**	11/20/03	Open	Accept	Bill Thomas	
M		Description: Test Plans do not meet "Test It As You Fly It" philosophy. For 13 or more system cases, GP-B tests are not performed in the full flight configuration or environment, due to limitations of facilities, time, or risks of operating the GP-B Space Vehicle in orbital modes while in 1-g. Impact: The confidence in flight readiness is reduced, and the risk of mission failure is increased.		L: 1 C(c): 1 C(s): 1 C(t): 5	Stanford/Lockheed has delivered an update to S0622 Revision A, dated December 30, 2002; this document has been signed by their management as of 9 Jan 03. The document is sufficient to record the exceptions to the NASA/MSFC "Test It As You Fly It" philosophy. The Risk Owner recommends acceptance.		The Program Office concurs with the Risk Owner's recommendation to accept this risk.
6	Example-01	**Valve Seals Leakage During Launch and Ascent**	11/20/03	Open	Accept	Jane Doe	
L		Description: Valve leakage due to poor seal performance. Impact: Inability to reach desired vacuum level resulting in data inaccuracies or contaminated optics. Concern is with performance in launch environment.		L: 2 C(c): 3 C(s): 3 C(t): 3	Redesign or remove and replace would be programmatically unacceptable. The Risk Owner recommends acceptance.		The Program Office concurs with the Risk Owner's recommendation to accept this risk.

Active Approach & Associated Risk Plan

Allows Management Comments for Any Clarifications

Contact Information
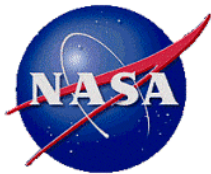
For more information on ePORT contact:

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